

## **Additions to the catalogue of mantid type material deposited in the Muséum d'histoire naturelle de Genève (Insecta: Mantodea)**

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**Additions to the catalogue of mantid type material deposited in the Muséum d'histoire naturelle de Genève (Insecta: Mantodea).** - We present here additions to an existing catalogue of mantid types (Mantodea) in the Muséum d'histoire naturelle de Genève with 27 new potential types. These are presented alphabetically with the number of specimens, sex, kind of type, label data and the box number where the specimens are stored. The new types are mostly of species described by Henri de Saussure.

**Additions au catalogue du matériel types de Mantes déposés au Muséum d'histoire naturelle de Genève (Insecta: Mantodea).** - Nous présentons ici une addition au catalogue des types de mantes (Mantodea) du Muséum d'histoire naturelle de Genève avec 27 nouveaux types potentiels. Les types sont présentés par ordre alphabétique avec le nombre de spécimens, le sexe, le genre de type, les différentes étiquettes et le numéro de boîte où les individus sont stockés. Ces nouveaux types sont principalement des espèces décrites par Henri de Saussure.

**Keywords:** Mantodea, type-catalogue, Saussure.

### INTRODUCTION

The Mantodea collection of the Muséum d'histoire naturelle de Genève (MHNG) is of worldwide importance, largely because it houses the collection of Henri de Saussure, who described more than 50 genera and 300 species (Roy & Cuche, 2008). Saussure exchanged or bought material from other specialists and collections, augmenting the value of the MHNG holdings (Claparède, 1905). During the reorganization of the MHNG Mantodea collection, a number of type specimens not mentioned in the catalogue of Roy & Cuche (2008) were rediscovered. Many of them represent names that are now considered junior synonyms and the types had been placed in the collection under the supposedly valid names.

As many experts have studied this collection, it is not clear by whom some type labels were added. It appears that some locality labels were added after the publication of the description (and not always correctly), and in most cases of synonymy only the name assumed to be correct has been kept, making the identification of some specimens as types uncertain. In addition, the type concept has evolved, and although Saussure gave more information about his type series in his later publications, he never

labelled specimens as types. Consequently, the identification of specimens that might be considered types is more certain in some cases than in others. The status of the possible type specimens is discussed in the following list. We consider all these specimens to be syntypes unless it is clear from the description that a holotype was designated or that only one specimen was available to the author. It is possible that additional syntypes remain undetected in the MHNG collection.

Two of the specimens discussed are labelled as de Haan types. It is known that Saussure made extensive use of the holdings of the Nationaal Natuurhistorische Museum in Leiden (where de Haan's collection is housed) and that there are some de Haan Orthoptera syntypes amongst the MHNG holdings, but the real status of these specimens is difficult to determine because of the uncertainty about the use of the term "type" in the past.

The list presented follows the format of the previous catalogue (Roy & Cuche, 2008); the nomenclature follows Otte *et al.* (2011). Unless otherwise stated, the species remains in the original combination.

#### LIST OF POSSIBLE TYPE SPECIMENS

- aeta** Hebard, 1920 [*Amantis*]. One ♂ paratype (box 12) with three labels: "Zamboanga Mindanao Baker", "Amantis aeta Hebard ♂ PARATYPE HEBARD CLN" (orange card) and "8206". The holotype is in the collection of the Academy of Natural Sciences in Philadelphia.
- bicornis** Saussure, 1869 [*Oligonyx*]. One ♀ (box 11) corresponds quite well with the measurements given in the description, but has the end of the abdomen missing. There are two handwritten labels: "Tehuantepec Mexique M. H. de Saussure" and "Oligonyx bicornis ♀ Sauss." (green paper). Moreover, the description indicates "aptera, anne larva?" which matches perfectly with the specimen. This specimen is probably the holotype.
- bimaculata** Saussure, 1870 [*Acontista*]. One ♂ syntype from Brazil (box 2) labelled: "♂ Brésil M. H. de Saussure" and "Acontista bimaculata Sauss." (handwritten on green paper). This species is now considered a synonym of *Acontista aurantiaca* (Burmeister, 1838).
- capitata** Saussure, 1869 [*Chiropacha*]. One ♂ syntype (box 8) with two handwritten labels: "♂ c. Guérin" and "Lygdamia capitata ♂ Sauss!" (pink paper). The original description gives "Africa?" as the locality, which explains the absence of locality data on the label. This species was transferred to the genus *Lygdamia* by Saussure (1899) and is currently placed in *Galepsus* (*Onychogalepsus*).
- championi** Saussure & Zehntner, 1894 [*Phasmomantis*]. One ♀ syntype (box 30) with three labels: "Coll. G. et S. Volc. Chiriqui G.C. Champ." (printed white card), "Phasmomantis championi, Sauss. ♀" (handwritten on green paper) and "Taumomantis championi (S. Z.) det. Beier".
- chlorophaea var. cornuta** Saussure & Zehntner, 1894 [*Theoclytes*]. Although the MHNG collection includes several potential syntypes under the name *T.*

*chlorophaea* (box 30), none could be positively identified because the description does not distinguish between the type locality of the variety and the distribution of the nominal form. The specimens in the collection are in any case slightly smaller than indicated in the description. This variety is currently regarded as a valid species, *Phyllovates cornuta* (Saussure & Zehntner, 1894).

***claraziana*** Saussure, 1869 [*Coptopteryx*] 5 ♂ syntypes (box 17) with two handwritten labels: "♂ Bahia blanca Rep. Arg. env. G. Claraz" and "Coptopteryx crenaticollis Blanch." (green paper). The specimens were placed in the collection as "*C. crenaticollis* Blanchard" because Saussure (1870) considered *C. claraziana* a junior synonym of this species. "*C. crenaticollis*" is a *nomen nudum* however, and *C. claraziana* is the valid name.

***cubensis*** Saussure, 1869 [*Gonatista*]. Four ♂, two ♀ and one specimen of unspecified sex (♀?) are probably syntypes (box 6). Two ♂ and one ♀ labelled: "[sex] Cuba M. H. de Saussure", two ♂ and one ♀ labelled: "[sex] Cuba (Mr.) Poey" and the unspecified specimen: "75-2 ♀ = 5-23 *Gonatista cubensis* Sauss." Each specimen has also a label "*Gonatista grisea* Fabr." (green paper). All labels are handwritten. *G. cubensis* is now considered a junior synonym of *G. reticulata* (Thunberg, 1815), but Saussure & Zehntner (1894) placed it in synonymy with *G. grisea* (Fabricius, 1793), hence the identification labels.

***elegans*** Saussure, 1869 [*Acontista*]. One ♂ syntype (box 3), missing the abdomen but corresponding to the measurement in the description (30 mm from the head to the end of the wings). It carries two handwritten labels: "♂ Guyanne M. H. de Saussure" and "*Acontista perspicua*, Fab. (*elegans*, Sauss.)" (green paper). This species name is now considered a junior synonym of *Raptrix perspicua* (Fabricius, 1787).

***emortualis*** Saussure, 1869 [*Mantis*]. Two probable ♂ syntypes (box 28), placed in the collection as *Paramantis prasina* (Serville, 1839). Both match the measurement given in the description and each has two handwritten labels: "♂ Ile Bourbon M. H. de Saussure" and "*Mantis emortualis* ♂ type Sauss." (red paper). In addition, one of them bears a label "*Mantis prasina* Serv. Det Beier" and the other "*Paramantis prasina* (Serv.) R. Roy det. 1974", both handwritten. The original description gives the type locality as "Patria?" rather than the more precise provenance on the labels. *M. emortualis* is now considered a junior synonym of *Paramantis prasina* (Serville, 1839).

***filiformis*** Saussure, 1869 [*Oligonyx*]. One ♂ (box 11) in the collection as *Thesprotia infumata* (Serville, 1839) is almost certainly a syntype. This specimen, unfortunately rather damaged, carries three handwritten labels: "♂ Amer. meri. coll. Jurine", "*Thesprotia filiformis*" (green paper) and "*Thesprotia infumata* (Serv.) det. Beier". This species name is now considered a junior synonym of *Thesprotia infumata* (Serville, 1839).

***gryps var?*** Saussure & Zehntner, 1894 [*Harpagonyx*]. A variety of this species is mentioned in the original description. There is a ♂ specimen, in the MHNG

collection as *Oligonyx bicornis* Saussure (box 11), which corresponds to the description. It bears two labels: "Atoyac, Vera Cruz. April. H.H.S." and "Harpagonyx gryps Sauss. ♂ var.?" (handwritten on green paper). This specimen may be considered a syntype of *H. gryps* Saussure & Zehntner, 1894, although it is clear that Saussure and Zehntner were not sure if it was conspecific with the rest of the type series. A junior synonym of *Oligonyx bicornis* Saussure, 1869.

**humbertiana** Saussure, 1869 [*Empusa*]. Two ♀ and one ♂ (box 55) are probably syntypes. Each has two handwritten labels. For the ♂: "♂ Ceylan V<sup>g</sup>e Humbert" and "Empusa unicornis Linn." (yellow paper); the first ♀: "♀ Ceylan V<sup>g</sup>e Humbert" and "Empusa unicornis Linn." (yellow paper) and the second ♀: "♀ Trincomalie Ceylan V<sup>g</sup>e Humbert" and "Empusa unicornis Linn." (yellow paper). *E. humbertiana* was synonymised with *Gryllus unicornis* by Saussure (1871), but the latter is a nomen dubium and both are now considered junior synonyms of *Empusa (Empusa) pennata* (Thunberg, 1815) (see Roy, 2004).

**indica** Saussure, 1869 [*Humbertiella*]. One ♀ syntype (box 6) with two handwritten labels: "♀ Indes or. M. H. de Saussure" and "Humbertiella indica Sauss." (yellow paper).

**manillensis** Saussure, 1870 [*Hierodula*]. Three specimens (box 22) correspond quite well to the measurements in the description and could be considered as syntypes. The first is a ♂, lacking the abdomen and with three handwritten labels: "♂ Manille M. H. de Saussure", "Hierodula bipapilla Serv." (yellow paper) and "Hierodula patellifera Serv. E. Giglio-Tos, det.". The second has two labels: "600-38 Manille Indes Or. M. H. de Saussure" and "Hierodula manillana Giglio-Tos, E. Giglio-Tos, det.". The third has three labels: "600-38 Manille Indes Or. M. H. de Saussure", "Manille" and "Hierodula patellifera Serv. E. Giglio-Tos, det.". This specimen is smaller than indicated in the description. This species name is now considered a junior synonym of *Hierodula patellifera* (Serville, 1839).

**moseri** Saussure, 1871 [*Iris (Fisheria)*]. Two ♀ syntypes (box 15), each with two handwritten labels: "♀ Turkestan Russe M. H. de Saussure" and "Bolivaria moseri Sss." (blue paper). This species name is now considered a junior synonym of *Bolivaria xanthoptera* (Olivier, 1792).

**oligoneura** de Haan, 1842 [Mantis]. One specimen (box 3) is possibly a syntype. There are three handwritten labels: "Type de Haan" (off-white card), "Acromantis oligoneura de Haan" (yellow paper) and "oligoneura [illegible] Padang, Sumatra". The original description did not mention the type locality. This species is currently placed in genus *Acromantis* Saussure, 1870.

**palliat** de Haan, 1842 [*Mantis (Deroplatys)*]. One specimen, in the collection as *Deroplatys desiccata* Westwood, 1839 (box 19), has two handwritten labels: "Type de Haan" (off-white card) and "Deroplatys desiccata [sic] de Haan" (yellow paper). This species name is now considered a junior synonym of *Deroplatys desiccata* Westwood, 1839.

- perloides* Saussure, 1869 [*Humbertiella*]. One specimen (box 19) with missing abdomen (but consistent with the measurement given in the description) is probably a syntype. It has three handwritten labels: "Sénégal colln. Guérin", "Elaea perloides Sauss." (pink paper) and "Elaea marchali (Coq, Reiche & Fairm.) R. Roy det. 1987". *H. perloides* is now placed in the genus *Elaea* Stål, 1877.
- praedicatoria* Saussure, 1870 [*Stagmatoptera*]. Three syntypes (box 41). The first has five handwritten labels: "609-56 Alto Amazon Brésil M<sup>r</sup>. Brunner d. W.", "21" (off-white paper), "Alto Amazon." (off-white paper), "Stagmat. Praedicato. Sauss." (green paper) and "Stagmatoptera sp. nov. H<sup>t</sup> Amazon. Bolivar.". The second has three handwritten labels: "609-56 Alto Amazon Brésil M<sup>r</sup>. Brunner d. W.", "Stagmat. praedicat. Sauss." (green paper) and "Alto Amazon Stagmatoptera spec. nov. ach. à M Brunner" (green paper). The third has four handwritten labels: "609-56 Manaos Brésil M<sup>r</sup>. Brunner d. W.", "Stagmat. praedicator Sauss." (green paper), "praedicatoria" (off-white paper) and "Stagmatoptera Praecaria Manaos Amazon" (off-white paper). Note: two variant spellings were used by Saussure in the original description, the key to species has *praedicatoria* and the description proper *predicatoria* (the former being that currently accepted).
- septentrionalis* var. *minor* Saussure & Zehntner, 1894 [*Stagmatoptera*]. One ♀ syntype (box 43) with three handwritten labels: "♀ Venezuela", "Venezuela" and "Stagmatoptera septentrionalis Sss & Z. var. minor, Sss & Z." (green paper). This variety is probably a distinct species (Roy, pers. comm.).
- stolli* Saussure & Zehntner, 1894 [*Phyllovates*]. One ♀ syntype (box 31) with two handwritten labels: "♀ c. [?]ichel." and "Theoclytes stollī - cingulata Sauss & Pict.[sic]" (green paper). *P. stollī* is the name given to the specimens originally identified by Saussure as "*Theoclytes cingulata* (Stoll)" and subsequently recognised as a distinct species.
- striolatus* var. Saussure & Zehntner, 1894 [*Oligonyx*]. The original description included a variety of this species. A ♂ specimen in the collection (box 11) matches the description, with 4 labels: "M<sup>r</sup>. Hy. de Sauss." (printed on green paper), "Duenas, Guatemala, G. C. Champion", "620-90 Guatemala Amer. cent. Coll. Godm. & Salv." and "Oligonyx striolata, ♂. var. Sss." (handwritten on green paper). It could be considered a syntype of *Oligonicella striolata* (Saussure & Zehntner, 1894) although it is clear that Saussure and Zehntner were not sure if it was conspecific with the rest of the type series.
- surinamensis* Saussure, 1869 [*Theoclytes*]. One ♀, in the collection as *Phyllovates parallela* (de Haan, 1842) (box 31), is possibly a syntype. This specimen has three handwritten labels: "♀ Guyanne M. H. de Saussure", "Theoclytes parallela de Haan" (green paper) and "parallela de Haan Guyanne" (green paper). The status of the specimen is uncertain because it is a little bigger than indicated in the description and the original description gives Surinam (the Dutch part of Guyana) as type locality while the label has only Guyana, suggesting French

Guyana. Saussure (1871) placed *T. surinamensis* in synonymy with *T. parallela* (de Haan, 1842). *T. parallela* is currently placed in the genus *Phyllovates* Kirby, 1904.

**vicina** Saussure, 1870 [*Stagmomantis*] One syntype (box 45) with three handwritten labels: "2-14 Guatemala H. d. Saussure", "15" and "Stagmom. Vicina Sauss." (green paper).

**vitreoides** Giglio-Tos, 1912 [*Hierodula*]. One paratype (box 24) with three labels: "600-38 Manilla Indes or. M<sup>r</sup>. H. de Saussure" (handwritten), "Manille" (off-white paper) and "Hierodula vitreoides Giglio-Tos E. Giglio-Tos, det." (handwritten on off-white paper). This specimen is referred to as a paratype by Ehrmann (2002), although not labelled as such.

**voeltzkowiana** Saussure, 1899 [*Hierodula*]. One syntype (box 32) with three labels: "Voeltzkow. Aldabra" (off-white paper), "Hierodula voeltzkowiana ♀ Sauss." (handwritten on red paper) and "Polyspilota voeltzkowiana Sauss. ♀ R. Roy det 1998". This species is currently placed in the genus *Polyspilota* Burmeister, 1838.

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